

## CLAIMS

1. Electromagnetic retarder (1) for a vehicle arranged between a brake pedal (2) and between at least one wheel (3) of the vehicle, intended to assist the braking of a vehicle through a transmission (4), and containing a stator (6) cooled by circulating a fluid in at least one cavity (13) contained in the stator (6), characterized by the fact that it is offset in relation to the transmission.
2. Retarder according to claim 1, characterized by the fact that the electromagnetic retarder is offset in relation to the transmission so that one axis of the electromagnetic retarder, corresponding to one axis (9) of the rotor and one axis (15) of the stator of this retarder, is parallel to one axis (14) of the transmission.
3. Retarder according to claim 1, characterized by the fact that the electromagnetic retarder is connected to the transmission (4) by a speed increasing device (16).
4. Retarder according to claim 3, characterized by the fact that the speed increasing device (16) has a gear device.
5. Retarder according to claim 4, characterized by the fact that the speed increasing device (16) intervenes between a shaft presented by the transmission (4) and an arm (19) integrated with a rotor (5) presented by the electromagnetic retarder.
6. Retarder according to claim 1, characterized by the fact that it includes:
  - an armature stator (6) and a winding rotor (5), with the rotor being inserted into the stator and intended to turn around an axis (15) of the stator; and
  - a wall of the armature stator that has at least one cooling cavity (13), and said cooling cavity is extended by an extension supported by the wall of the stator which extends to one end (32) of a stator that is generally perpendicular to the direction of one axis (9) of the rotor corresponding to the axis (15) of the stator.

7. Retarder according to claim 6, characterized in that the electromagnetic retarder has, first, at least one coil and, second, an excitation alternator to provide electric power to the coil (7) of the electromagnetic retarder.
8. Retarder according to claim 7, characterized by the fact that the alternator is placed at least, in major part, inside the hollow winding rotor (5) of the electromagnetic retarder